



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,254	12/12/2003	Kevin Cowles	IBM1P046A/SJO9000001US2	9799
50535	7590	02/03/2006	EXAMINER	
ZILKA-KOTAB, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			KIM, PAUL D	
			ART UNIT	PAPER NUMBER
			3729	
DATE MAILED: 02/03/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

e

<b>Office Action Summary</b>	<b>Application No.</b> 10/735,254	<b>Applicant(s)</b> COWLES ET AL.	
	<b>Examiner</b> Paul D. Kim	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-28 is/are pending in the application.
- 4a) Of the above claim(s) 17-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This office action is a response to the election of species filed on 11/28/2005.

#### ***Drawings***

1. The drawings are objected to because "Fig. 1" is appeared both on pages 1 and 2. Also, drawings for Fig. 1 of page 1 and Fig. 2 of page 3 need separate headings for each of the sub-drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claim 8 is objected to as being a substantial duplicate of claim 3. Claim 3 and claim 18 are essentially duplicates of one another or else are so close in content that they both cover the same thing, despite a slight difference in wording. It is improper to have two claims, which contain the same limitations, in the same application as one claim would be a substantial duplicate of the other claim. Appropriate correction is required.

Re. Claim 5: The phrase "a controlled ground potential" as recited in line 2 appears to be --the controlled ground potential--.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-8 and 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Albrecht et al. (US PAT. 6,052,258).

Albrecht et al. teach a process of making conductive connection between conductive layers (150, 154), wherein the conductive layers are separated by one dielectric layer (152) comprising steps of: exposing portions of at least two conductive

Art Unit: 3729

layers (150, 154) separated by a dielectric layer (152) as shown in Fig. 17; applying a conductive material (650, an electrically conductive epoxy) to the exposed portions of the conductive layers, the conductive material creating an electrical coupling between the conductive layers as shown in Fig. 17; and grounding (170, 172) at least one of the conductive layers (150) to a controlled ground potential as shown in Fig. 18, wherein the portions of the conductive layers are exposed by recessing (360) the conductive layer (154) and the dielectric layer (152) positioned between the conductive layers, the conductive material overhanging an uppermost of the conductive layers as shown in Fig. 17 (see also col. 3, line 26 to col. 4, line 8 and col. 7, line 13 to col. 8, line 63).

As per claims 3 and 8 a material of one the conductive layers (150) is copper and a material of the other of the conductive layers is stainless steel (154).

As per claim 4 the conductive material is a conductive adhesive such as conductive epoxy.

As per claim 5 one of the conductive layers (150) is grounded to the controlled ground potential using one or more dedicated ground paths etched from one or more of the conductive layers as shown in Fig. 18 (col. 3, lines 33-36).

As per claims 6 and 7 one of the conductive layer has a via formed therein, wherein the via is round or cross-shaped as shown in Figs. 7 and 17.

As per claim 12 one of the conductive layer (154) has a step back edge as shown in Fig. 17.

As per claim 13 the conductive material (650) overhangs the stepped back edge as shown in Fig. 17.

As per claim 14 at least one of the exposed conductive layer is exposed as shown in Fig. 17.

As per claims 15 and 16 the conductive layers form part of a lead suspension (32) for suspending an electric component such as a magnetic head (30) shown in Figs. 2 and 3.

***Claim Rejections - 35 USC § 103***

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albrecht et al.

Albrecht et al. teach all of the limitations including the conductive material made of the conductive epoxy, but fail to teach soldering process. In the manufacturing the magnetic head, the soldering process for the magnetic head element is well known in the art. Therefore, since the soldering process for the magnetic head element is old and well known and used for manufacturing the magnetic head, the soldering process of any part of the magnetic head is used for electrically connecting between the conductive layers. In addition, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to apply the solder as recited in the claimed invention because Applicant has not disclosed that the solder as recited in the claimed invention provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have

expected Applicant's invention to perform equally well with Albrecht et al. because the solder as recited in the claimed invention would perform equally well such as conductive epoxy for electrically connecting between the conductive layers in Albrecht et al. Therefore, it would have been an obvious matter of design choice to modify the conductive epoxy of Albrecht et al. to obtain the invention as specified in claims 9-11.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1 and 3-16 have been considered but are moot in view of the new ground of rejection.

7. Applicant argues that the prior art of record fails to disclose the claimed invention such as the portions of the conductive layers are exposed by recessing at least one of the conductive layers and any dielectric layers positioned between the conductive layers, the conductive material overhanging an uppermost of the conductive layers. Examiner traverses the argument that Fig. 17 of Albrecht et al. show that the portion of the conductive layer (150) are exposed by recessing (360) the conductive layer (154) and the dielectric layer (152) positioned between the conductive layers and the conductive material is overhanging an uppermost of the conductive layers.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 3729

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

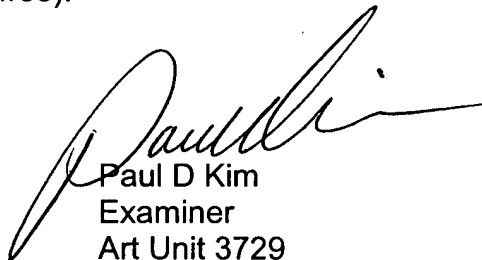
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D. Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Friday between 6:00 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim  
Examiner  
Art Unit 3729